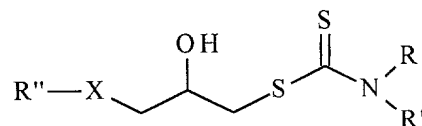


WHAT IS CLAIMED IS:

1. A composition having the following chemical structure



wherein R and R' may be hydrogen or alkyl, whereby at least one of R or R' is alkyl,

- 5 where R'' is alkyl, or R'''OCOCH₂, or R'''OCOCH₂CH₂, where R''' is alkyl, and X is S.

2. The composition of claim 1, wherein R and R' are alkyl.

3. The composition of claim 1, wherein R'' is R'''OCOCH₂.

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4. The composition of claim 1, wherein R'' is R'''OCOCH₂CH₂.

5. The composition of claim 1, wherein R'' is alkyl.

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6. The composition of claim 5, wherein the alkyl group is C₄ to C₁₂.

7. The composition of claim 5, wherein the alkyl group is C₉ to C₁₂.

8. The composition of claim 1, wherein R and R' are independently selected from

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alkyl groups having three to eight carbon atoms.

9. The composition of claim 1, wherein R and R' are independently selected from alkyl groups having four to six carbon atoms.
- 5 10. A method of preparing a composition comprising reacting an alkyl glycidyl thioether with a primary and/or secondary amine, and carbon disulfide.
11. The method of claim 10, wherein the composition is a lubricant additive.
- 10 12. A lubricant additive prepared by the method of claim 11.
13. The reaction product prepared by the method of claim 10.
14. A lubricating oil comprising the composition of claim 1 and a base oil of
15 lubricating viscosity.
15. The lubricating oil of claim 14, further comprising at least one of a detergent, a dispersant, an antiwear agent, a friction modifier, a pour point depressant, a foam inhibitor, a corrosion inhibitor, a rust inhibitor, and a viscosity index improver.
- 20 16. A lubricating oil composition comprising the lubricant additive of claim 12, and a base oil of lubricating viscosity.

17. The lubricating oil of claim 14, further comprising at least one antioxidant
selected from diphenylamines, phenothiazines, hindered phenols, sulfurized hindered
phenols, alkyl phenols, sulfurized alkyl phenols, methylene-bridged hindered phenols,
5 sulfides and polysulfides, sulfurized olefins, and sulfurized fats and oils.
18. A passenger car crankcase engine oil comprising the composition of claim 1.
19. A heavy duty diesel engine oil comprising the composition of claim 1.
- 10 20. A railroad oil comprising the composition of claim 1.
21. A natural gas engine oil comprising the composition of claim 1.
- 15 22. A hydraulic oil comprising the composition of claim 1.
23. A turbine oil comprising the composition of claim 1.
24. A rust and oxidation oil comprising the composition of claim 1.
- 20 25. An automatic transmission fluid comprising the composition of claim 1.

26. The composition of claim 1, wherein the total sum of carbon atoms in R, R' and R'' is greater than ten.
27. The composition of claim 1, wherein R, R', R'', and R''' are alkyl and are
5 independently selected from linear and branched isomers.
28. The composition of claim 1, wherein R, R', R'', and R''' are alkyl and are independently selected from methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, undecyl, dodecyl, tridecyl, tetradecyl, pentadecyl, hexadecyl, heptadecyl,
10 and octadecyl, and isomers thereof.
29. The method of claim 10, wherein the alkyl glycidyl thioether, primary and/or secondary amine, and carbon disulfide are combined at approximately equal molar concentrations.
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30. The method of claim 10, comprising the steps:
providing an epoxide by reacting a mercaptan and epichlorohydrin; and
reacting the epoxide with the amine and carbon disulfide.
- 20 31. The method of claim 30, wherein the epoxide is not isolated or purified before reacting with said amine and carbon disulfide.

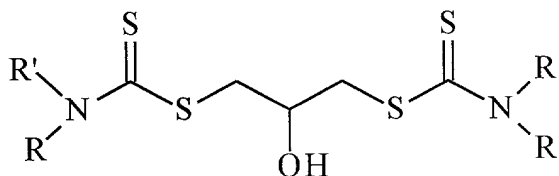
32. The method of claim 10, wherein the epoxide is alkyl glycidyl thioether and the amine is a primary amine.

33. The method of claim 10, wherein the epoxide is alkyl glycidyl thioether and the amine is a secondary amine.

34. The method of claim 10, wherein the alkyl glycidyl thioether is selected from methylglycidyl thioether, ethylglycidyl thioether, *n*-propylglycidyl thioether, *n*-butylglycidyl thioether, *sec*-butylglycidyl thioether, *n*-hexylglycidyl thioether, cyclohexylglycidyl thioether, *n*-octylglycidyl thioether, *tert*-nonylglycidyl thioether, *n*-dodecylglycidyl thioether, *tert*-dodecylglycidyl thioether, and mixtures thereof.

35. The method of claim 10, wherein the alkyl glycidyl thioether is a carboxylic acid ester-substituted alkyl glycidyl thioether.

36. A composition having the following chemical structure



37. The composition of claim 36, wherein R and R' are independently alkyl groups of C₃ or greater.

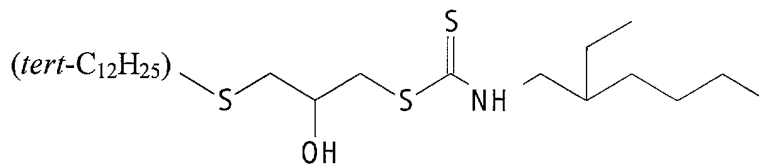
38. A composition of 2-propanol-1,3-bis-dialkylcarbamodithioate.

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39. A composition of 3-(*tert*-dodecylthio)-2-hydroxypropyl 2-ethylhexylcarbamodithioate.

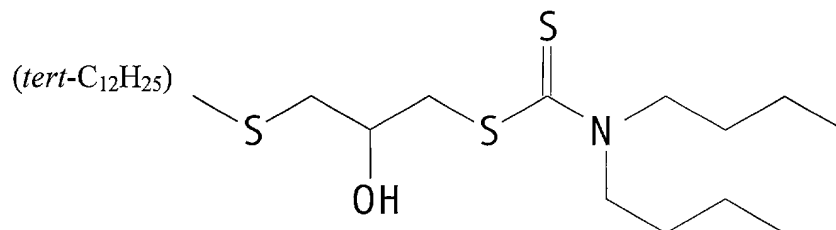
40. A composition having the following chemical structure:

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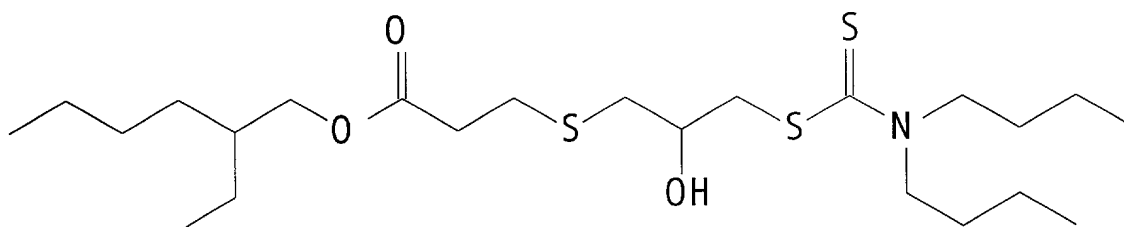
41. A composition of 3-(*tert*-dodecylthio)-2-hydroxypropyl dibutylcarbamodithioate.

42. A composition having the following chemical structure:



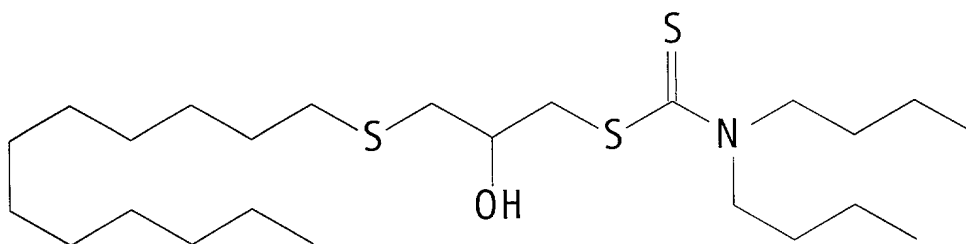
43. A composition of 2-ethylhexyl 3-[[3-[[[(dibutylamino)thioxomethyl]thio]-2-hydroxypropyl]thio]propanoate.

5 44. A composition having the following chemical structure:



45. A composition of 3-(*n*-dodecylthio)-2-hydroxypropyl dibutylcarbamodithioate.

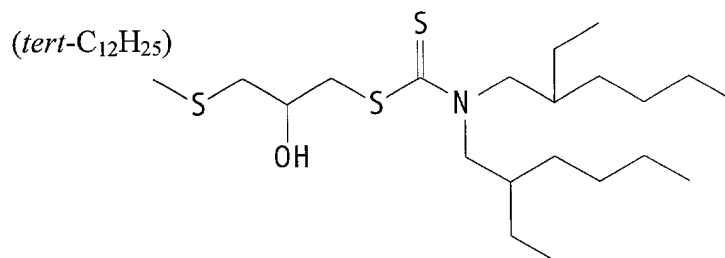
15 46. A composition having the following chemical structure:



47. A composition of 3-(*tert*-dodecylthio)-2-hydroxypropyl bis(2-ethylhexyl)carbamodithioate

48. A composition having the following chemical structure:

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10 49. A method of reducing the oxidation of a lubricating oil comprising adding to an oil of lubricating viscosity an oxidation-reducing amount of a composition of claim 1.

50. A method of reducing the deposit formation in an engine lubricated with a lubricating oil, said method comprising adding to an oil of lubricating viscosity a deposit-reducing amount of a composition of claim 1, and lubricating an engine with said lubricating oil.

51. A method of reducing engine wear in an engine lubricated with a lubricating oil, said method comprising adding a wear-reducing amount of a composition of claim 1 to an oil of lubricating viscosity, and lubricating an engine with said oil.

52. A method of reducing engine friction in an engine lubricated with a lubricating oil, said method comprising adding a friction-reducing amount of a composition of claim 1 to an oil of lubricating viscosity, and lubricating an engine with said oil.

5 53. A method of improving fuel economy in an engine lubricated with a lubricating oil, said method comprising adding a fuel economy-improving amount of a composition of claim 1 to an oil of lubricating viscosity, and lubricating an engine with said oil.

10 54. The method of claim 49, further comprising lubricating an engine with said lubricating oil.

55. The method of claim 49, further comprising lubricating a gear with said lubricating oil.

15 56. The method of claim 49, further comprising lubricating an automatic transmission with said lubricating oil.

57. The method of claim 49, further comprising lubricating a hydraulic mechanism with said lubricating oil.

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58. An engine lubricated with an oil comprising a composition of claim 1.

59. A gear lubricated with an oil comprising a composition of claim 1.

60. An automatic transmission lubricated with an oil comprising a composition of claim 1.

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61. A turbine lubricated with an oil comprising a composition of claim 1.